NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

FOREST STAND IMPROVEMENT

(Acre)
CODE 666

DEFINITION

To manipulate species composition, stand structure, and stocking by cutting or killing selected trees and understory vegetation.

PURPOSES

- To increase the quantity and quality of forest products, e.g., sawtimber, veneer, wood fiber, poles, pilings, maple syrup, naval stores, nuts and fruits.
- To harvest forest products.
- To initiate forest stand regeneration.
- To reduce the potential damage from wildfire, pests and moisture stress.
- To restore natural plant communities.
- To achieve a desired understory plant community.
- To improve aesthetic, recreation, and open space values.
- To improve wildlife habitat.
- To improve water conservation and yield.

CONDITIONS WHERE PRACTICE APPLIES

On all forestland where manipulation of vegetation is needed.

CRITERIA

General Criteria Applicable to all Purposes

The harvest-regeneration strategy will be identified for all planned forest improvement harvesting:

- ♦ Uneven-aged management systems (single-tree selection, group selection, coppice selection)
- ♦ Even-aged management (clear-cut, seed-tree, shelterwood, coppice)

The extent or size of treatment area shall achieve the intended purpose.

Preferred tree and understory species of appropriate quality are identified and retained to achieve all planned purposes.

Spacing, density, size class, number, and amounts of trees and understory species to be retained will follow established guidelines for the intended purposes. The method, felling direction, and timing of tree cutting for harvesting shall facilitate efficient and safe tree removal and protect sensitive areas such as vernal pools, riparian zones, cultural resources, and structures.

Forest stand improvement activities will not cause excessive soil erosion, compaction or rutting.

Minimize hydrologic alterations and damage to remaining vegetation.

Slash and debris left on the site after treatment will not present an unacceptable fire, safety, environmental or pest hazard. Such material will not interfere with the intended purpose or other management activities.

Comply with applicable laws and regulations, including New Mexico Best Management Practices (BMPs).

CONSIDERATIONS

Silvicultural objectives and harvest-regeneration strategies may change over time and may be limited by prior management.

Successful regeneration of desirable species is usually dependent upon timely application of forest stand improvement and other practices, e.g., prescribed burning, site preparation, tree and shrub establishment, prescribed grazing, and use exclusion.

Adjust the extent, timing, size of treatment area or the intensity of the practice to minimize cumulative effects (on-site and off-site), e.g., hydrologic and stream alteration, habitat fragmentation, nutrient cycling, biodiversity, and visual resources.

Assess potential landowner and operator liability before forest stand improvement activities begin.

Time the practice to least disturb seasonal wildlife activities. Wildlife food and cover can be retained by minimal modifications to composition and spacing. Retention of selected dead and dying trees, including down material, will enhance wildlife habitat values and nutrient cycling.

The chosen method should be cost effective and protect cultural resources, wildlife habitat, water and soil resources and identified unique areas.

PLANS AND SPECIFICATIONS

Specifications for applying this practice and protection of the site shall be prepared and recorded using approved specification sheets, job sheets, technical notes, and narrative statements in the conservation plan or other acceptable documentation.

OPERATION AND MAINTENANCE

Detailed operation and maintenance requirements are addressed in the specification for this practice.

Periodic inspections during treatment activities are necessary to ensure that objectives are achieved and resource damage is minimized. Contact the local NRCS conservationist immediately when unexpected problems, questions arise during practice installation.

References:

Adams Paul W., Soil Compaction on Woodland properties, Oregon State University Extension Circular 1109 Dated 09/1997

U.S.D.A. Forest Service, Region 3 FSH2509.22 - Soil and Water Conservation Practices Handbook, Dated 12/03/1990

Brozka, Robert J., New Mexico Natural Resources Department, Forestry Division, Water Quality Protection Guidelines for Forestry Operations in New Mexico Dated 03/1983

New Mexico Energy, Minerals and Natural Resources Department, Forestry and Resources Conservation Division New Mexico Forest Practices Guidelines Dated 10/1990

Internet References:

http://eesc.orst.edu/AgComWebFile/EdMat/edmatindexfor.html

http://www.ianr.unl.edu/pubs/forestry/nfs/nfs-1.htm#roads

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http://www.metla.fi/info/vlib/Forestry/